Flovent Diskus Product Profile Summary

This information is provided in response to your request for information about Flovent® Diskus® (fluticasone propionate inhalation powder).

DISEASE: CONSENSUS TREATMENT GUIDELINES FOR ASTHMA

- National asthma management guidelines recommend the use of low-dose inhaled corticosteroids (ICS) as the preferred therapy for all patients with mild persistent asthma. Additionally, the use of an ICS either alone or in combination with adjunctive therapy is recommended as a preferred therapy for all severities of persistent asthma.(1)

BENEFITS OF *FLOVENT DISKUS* IN ASTHMA

- *Flovent Diskus* contains the potent corticosteroid fluticasone propionate which helps to reduce inflammation in the airways of patients with asthma.(2)
- *Flovent Diskus* 50 mcg is available in a *Diskus* device with 60 doses (1 month supply) and a build-in dose counter that keeps track of the number of inhalations remaining.
- *Flovent Diskus* is approved for use in patients 4 years of age and older with asthma.
- Inspiratory flow rates were sufficient to deliver an effective dose in children with asthma 4 and 8 years old using *Flovent Diskus*.
- The fluticasone propionate in *Flovent Diskus* has negligible oral bioavailability (<1%) due to incomplete absorption from the gastrointestinal tract and extensive first-pass metabolism by the liver.
- *Flovent Diskus* provided significant improvement in FEV_1 noted at week 1, the first spirometry analysis time point, compared with placebo. Maximum benefit may not be achieved for 1 to 2 weeks or longer.

EFFICACY OF *FLOVENT DISKUS* IN ASTHMA

- Three 12-week, placebo-controlled pivotal studies in 941 children 4-11 years of age, half of whom were receiving inhaled corticosteroids at baseline, showed significant improvements in pulmonary function, and patients were less likely to discontinue therapy due to asthma deterioration while receiving *Flovent Diskus* 50 mcg or 100 mcg twice daily compared with placebo.(2) (3) (4)
- Four 12-week, placebo-controlled pivotal studies conducted in 1036 adolescent and adult patients with persistent asthma randomized to *Flovent Diskus* 100 mcg, 250 mcg, or 500 mcg twice daily showed that measures of pulmonary function were statistically significantly improved compared with those of the placebo arm. (5) (6) (7) In addition, patients on *Flovent* were significantly less likely to discontinue study participation due to predetermined criteria of asthma deterioration.

SAFETY OF *FLOVENT DISKUS*

- Particular care is needed for patients who are transferred from systemically active corticosteroids to *Flovent* because deaths due to adrenal insufficiency have occurred in patients with asthma during and after transfer from systemic corticosteroids to less systemically available inhaled corticosteroids. Particular care should be taken in observing patients post-operatively or during periods of stress for evidence of inadequate adrenal response.(2)
- Co-administration of fluticasone propionate and ritonavir (a highly potent cytochrome P450 3A4 inhibitor) is not recommended unless the potential benefit to the patient outweighs the risk of systemic corticosteroid side effects.
- *Flovent* is not a bronchodilator and is not indicated for rapid relief of bronchospasm.
- Patients treated with *Flovent* should be observed carefully for evidence of systemic corticosteroid effects. It is possible that systemic corticosteroid effects such as hypercorticism and adrenal suppression (including adrenal crisis) may appear in a small number of patients, particularly when *Flovent* is administered at higher than recommended doses over a prolonged period of time.
- Orally inhaled corticosteroids may cause a reduction in growth velocity when administered to pediatric patients. A one-year, placebo-controlled US study assessed the potential growth effects of *Flovent* (inhalation powder) via *Diskhaler* at 50 and 100 mcg BID, in 325 prepubescent children 4 to 11 years of age. A separate subset analysis of children who remained pre-pubertal during the study revealed growth rates at 52 weeks of 6.10 cm/year (placebo; n = 57), 5.91 cm/year (50 mcg group; n = 74), and 5.67 cm/year (100 mcg group; n = 79). The clinical significance of these growth data is not certain. The growth of children and adolescents receiving orally inhaled corticosteroids, including *Flovent Diskus*, should be monitored routinely (e.g., via stadiometry).
- Rare instances of glaucoma, increased intraocular pressure, and cataracts have been reported in patients following the long-term administration of inhaled corticosteroids, including fluticasone propionate.
- In clinical studies with inhaled fluticasone propionate, the development of localized infections of the pharynx with Candida albicans has occurred.
- Adverse events in clinical trials with *Flovent Diskus* were mostly mild to moderate in severity.
- Adverse events with *Flovent Diskus* were mostly mild to moderate in severity, with <2% of patients discontinuing the studies because of adverse events. The most common adverse events (>5%) reported in clinical trials with *Flovent Diskus* 50 mcg twice daily and placebo, respectively, in patients ≥ 4 years old were: upper respiratory tract infection – 20% vs. 16%, throat irritation – 13% vs. 8%, sinusitis/sinus infection – 9% vs. 6%, nausea and vomiting – 8% vs. 4%, fever – 7% vs. 4%, and headache – 12% vs. 7%.

INDICATIONS OF *FLOVENT DISKUS*

- *Flovent Diskus* is indicated for the maintenance treatment of asthma as prophylactic therapy in patients 4 years of age and older. It is also indicated for patients requiring oral corticosteroid therapy for asthma. Many of these patients may be able to reduce or eliminate their requirement for oral corticosteroids over time. *Flovent Diskus* is not indicated for the relief of acute bronchospasm.(2)

DOSING FOR *FLOVENT DISKUS*

- The recommended starting dosages of *Flovent Diskus* for patients ≥ 12 years are 100 mcg to 1000 mcg twice daily based on prior asthma therapy. The highest recommended dosages are 500 mcg to 1000 mcg twice daily. For children 4-11 years, the recommended starting dosage is 50 mcg twice daily, and the highest recommended dosage is 100 mcg twice daily.[2]

REFERENCE(S)

1. Guidelines for the Diagnosis and Management of Asthma (EPR-3) 2007. NIH, NHLBI. August 2007. NIH publication no. 08-4051. *
2. Prescribing Information. *Flovent Diskus*. *
3. Peden DB, Berger WE, Noonan MJ, et al. Inhaled fluticasone propionate delivered by means of two different multidose powder inhalers is effective and safe in a large pediatric population with persistent asthma. J Allergy Clin Immunol 1998;102(1):32-38.*
4. LaForce CF, Pearlman DS, Ruff ME, et al. Efficacy and safety of dry powder fluticasone propionate in children with persistent asthma. Ann Allergy Asthma Immunol 2000;85:407-415. FLTA2008.*
5. Wolfe J, Rooklin A, Grady J, et al. Comparison of once- and twice-daily dosing of fluticasone propionate 200 mcg per day administered by Diskus device in patients with asthma treated with or without inhaled corticosteroids. J Allergy Clin Immunol 2000;105:1153-1161. FLTA2003, FLTA2004.*
6. ZuWallack R, Adelglass J, Clifford DP, et al. Long-term efficacy and safety of fluticasone propionate powder administered once or twice daily via inhaler to patients with moderate asthma. Chest 2000;118:303-312. FLTA2005.*
7. Galant SP, van Bavel J, Finn A, et al. Diskus and Diskhaler: efficacy and safety of fluticasone propionate via two dry powder inhalers in subjects with mild-to-moderate persistent asthma. Ann Allergy Asthma Immunol 1999;82:273-280. FLTA2001.*